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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/685,202	10/10/2000	Martin Rofheart	195671US8	4316

23400 7590 06/16/2004

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RESTON, VA 20190

EXAMINER

NGUYEN, HUY D

ART UNIT	PAPER NUMBER
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2681

16

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/685,202

Applicant(s)

ROFHEART ET AL.

Examiner

Huy D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 2,4-6,12-18,21,23-26,28,33,35,40,42 and 47 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-10 is/are allowed.
- 6) ☐ Claim(s) 1, 3, 7, 11, 19-20, 22, 27, 29-32, 34, 36-39, 41, 43-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 03/25/2004 have been fully considered but they are not persuasive.

Regarding the argument pertaining to the restriction requirement, the examiner confirms that Group I (claims 2, 21, 28, 35, 42) belongs to class 455, subclass 434; Group II (claims 3, 7, 9-11, 19, 22, 29-32, 36-39, 43-46) belongs to class 342, subclass 85; Group III (claims 4-6) belongs to class 342, subclass 25~~7~~; Group IV (claims 13-16, 18) belongs to class 455, subclass 457; Group V (claims 12, 17) belongs to class 455, subclass 456.1; Group VI (claims 23-26, 33, 40, 47) belongs to class 455, subclass 25.

2. Applicant's arguments filed 12/11/2003 have been fully considered but they are not persuasive.

Regarding the argument pertaining to claims 1, 3, 7, 11, 19-20, 22, 27, 29-32, 34, 36-39, 41, 43-46. The applicant stated that the combination of Hershey et al. and Ross would be non functional. The examiner argues that the combination of Hershey et al. and Ross would be functional if the distance between the ground station and the spacecraft is within the operating range.

The applicant also stated that there is no specific teaching in either Hershey et al. or Ross to combine their teachings. The examiner states that obviousness can be established by combining or modifying the teachings of the prior arts to produce the claimed invention if there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art (see *In re Fine*, 837 F.2d

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1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)). In this case, it would have been obvious to one of ordinary skill in the art to apply the teaching of Ross into the teaching of Hershey for precision and low cost.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 7, 11, 19-20, 22, 27, 29-32, 34, 36-39, 41, 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey et al. (U.S. Patent No. 5,878,034) in view of Ross (U.S. Patent No. 5,455,593).

Regarding claims 1, 11, 27, 34, 41, 43-46, Hershey et al. discloses a method for a ground station to determine when to send its information packets so as to arrive at the spacecraft at the beginning of a time slot. The calculation is based upon knowledge of the locations of the spacecraft and the transmitting ground station. The ground station determines the location of the spacecraft by the use of the propagation delays between the various ground stations (including itself) and the spacecraft [col. 2, lines 15-30]. Hershey et al. discloses the claimed invention except for transmitting and receiving information via UWB wireless medium. However, UWB systems are known in the art and characterized by their low probability of intercept and detection, multipath immunity, precision ranging and localization, and low cost. Ross teaches transmission via UWB [col. 3, lines 34-35]. Therefore, it would have been obvious to one of

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ordinary skill in the art, at the time of the invention, to transmit and receive information of Hersey et al. via UWB wireless medium as taught by Ross for precision and low cost.

Regarding claims 3, 7, 19, 22, 29-32, 36-39, Hershey et al. discloses the method of claim 1, further comprising determining a distance from local device to remote device based on amount of time, wherein step of performing a function in local device comprises performing function based on distance determined [col. 2, lines 18-19].

Regarding claim 20, the claim is the same as claim 1 except for a plurality of remote device. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the same method as in claim 1 for other remote device since it involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Allowable Subject Matter

5. Claim 8 has been rewritten in the independent form including all the limitations of the base claim. Therefore, claim 8 is now allowable with the same reason set forth in the previous office action (paper No. 9).

Claims 9-10 depend on claim 8. Therefore, they are allowable.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy D Nguyen whose telephone number is 703-305-3283. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Erika A Gary can be reached on 703-308-0123. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

in


ERIKA GARY
PATENT EXAMINER